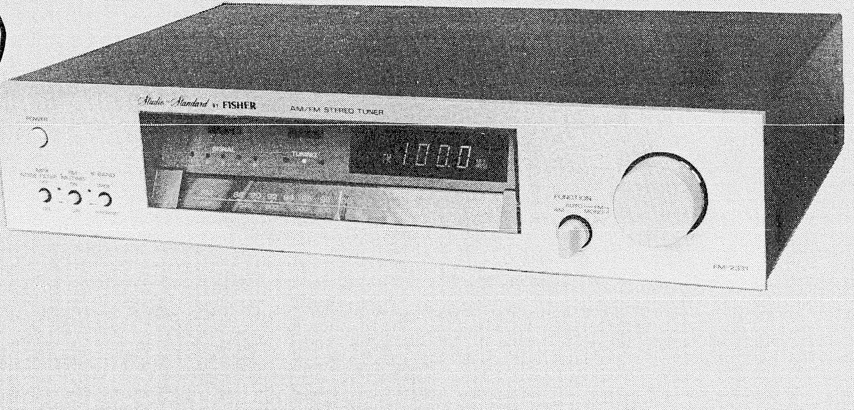
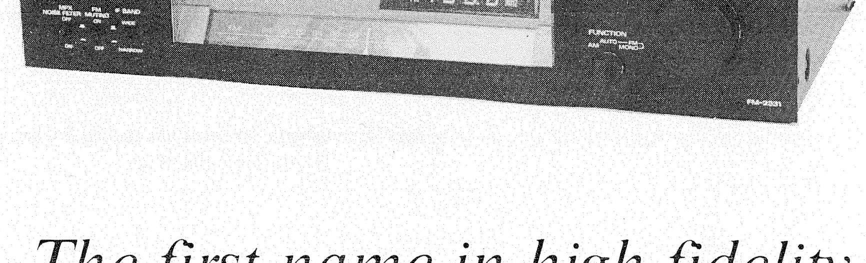
SERVICE MANUAL

FISHER

FM-2331

AM/FM
Stereo Tuner
(EUROPE)


Studio Standard by FISHER
AM/FM STEREO TUNER
POWER
FUNCTION
FM-2331


Studio Standard by FISHER
AM/FM STEREO TUNER
POWER
FUNCTION
FM-2331

The first name in high fidelity

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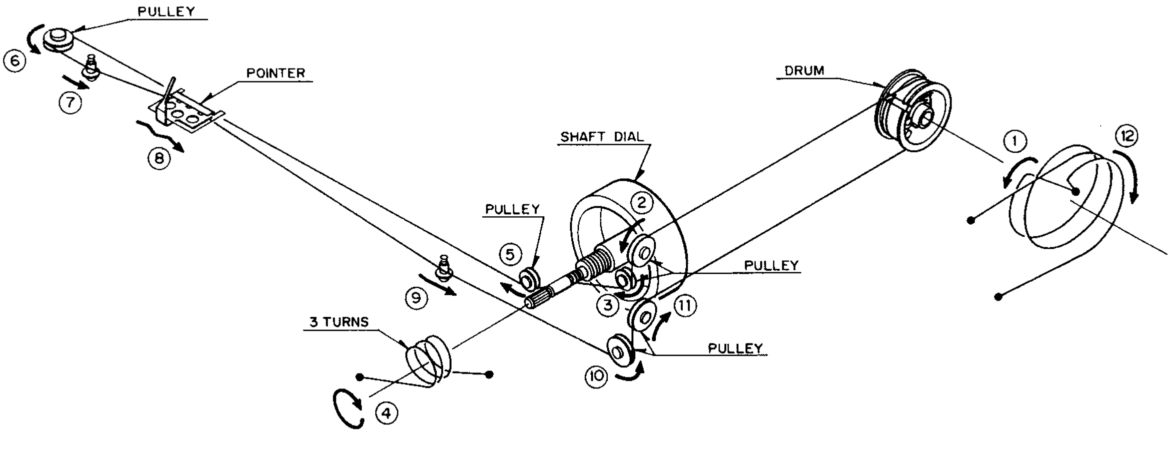
DIAL CORD STRINGING



PULLEY
⑥
⑦
POINTER
⑧
DRUM
SHAFT DIAL
①
⑫
PULLEY
②
⑤
PULLEY
⑨
③
⑪
3 TURNS
PULLEY
⑩
④

NOTE: Check to see that the dial cord is correctly strung by turning the dial.

SPECIFICATIONS

AM/FM STEREO TUNER		FM-2331
FM SECTION		
Tuning Range		87.5 – 108 MHz
DIN Sensitivity (75 ohms)		0.8 μV
Limiting Sensitivity (75 ohms)		0.6 μV
Muting Trigger Level (75 ohms)		5 μV
Stereo Sensitivity (46 dB, 75 ohms)		30 μV
S/N Ratio	(mono)	74 dB
	(stereo)	68 dB
Selectivity (DIN)		80 dB (narrow) 40 dB (wide)
Capture Ratio		0.8 dB (narrow) 0.7 dB (wide)
AM Suppression		65 dB
Spurious Rejection		100 dB
IF Rejection		90 dB
Sub-Carrier Suppression (19/38 kHz)		70 dB
T.H.D.	(mono)	0.07 % (wide)
	(stereo)	0.15 % (wide)
Frequency Response 20 kz – 15,000 Hz		±0.5 dB
Channel Separation (1,000 Hz)		50 dB
Output Voltage		≧800 mV
AM SECTION		
Tuning Range		520 – 1,605 kHz
Sensitivity		300 μV/m
S/N Ratio		55 dB
Image Rejection		50 dB
Selectivity (9 kHz)		42 dB
T.H.D.		0.3 %
Spurious Rejection		45 dB
GENERAL		
Power Requirements		110/120 V, 50/60 Hz
Power Consumption		16 W
Dimensions (W x H x D)		440 x 89 x 298 mm
Weight		5.6 kg

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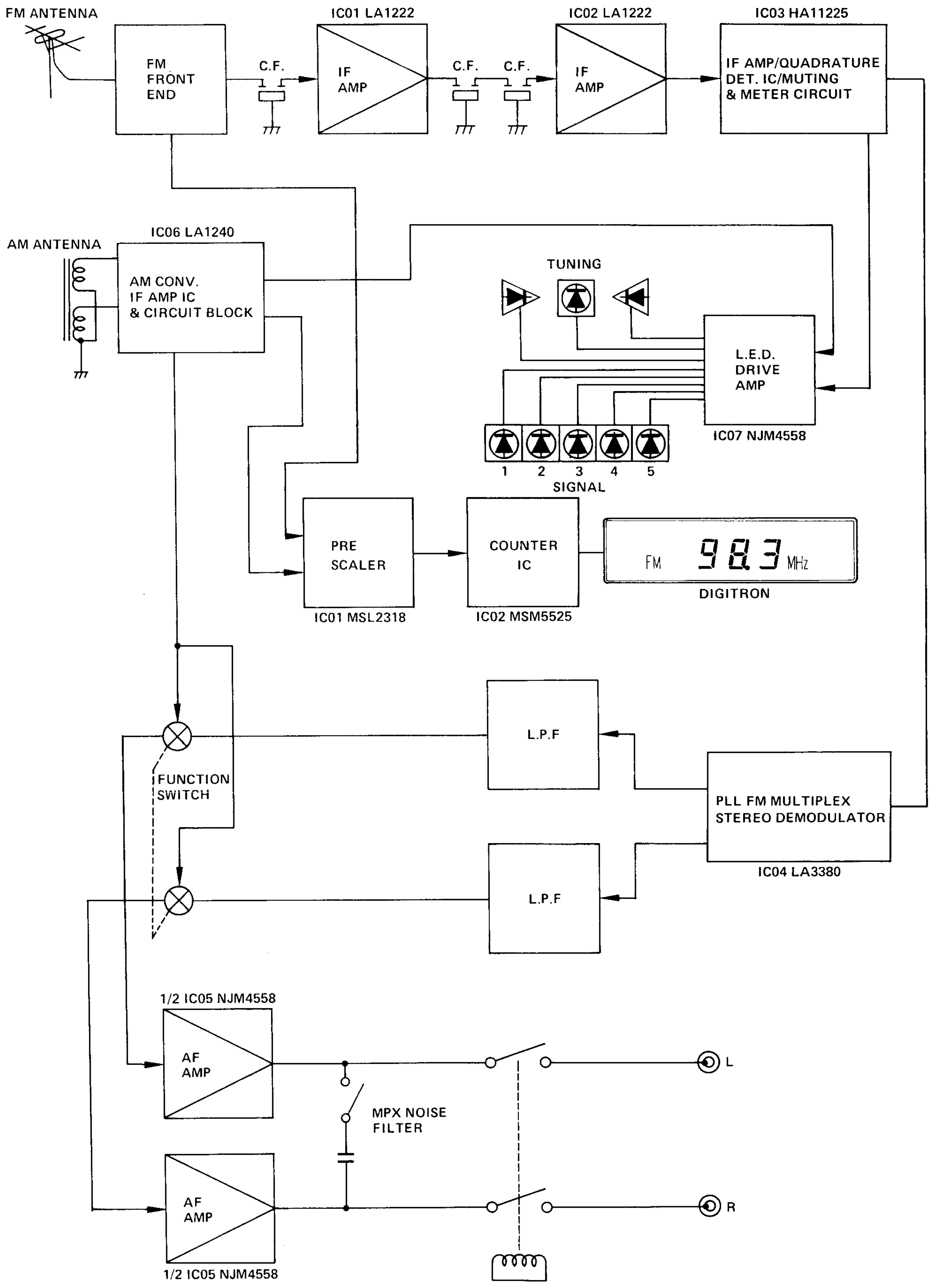
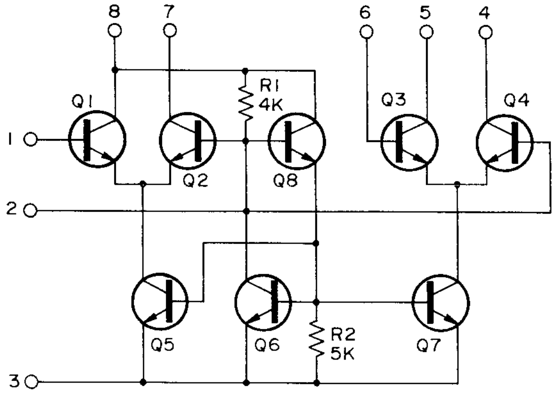
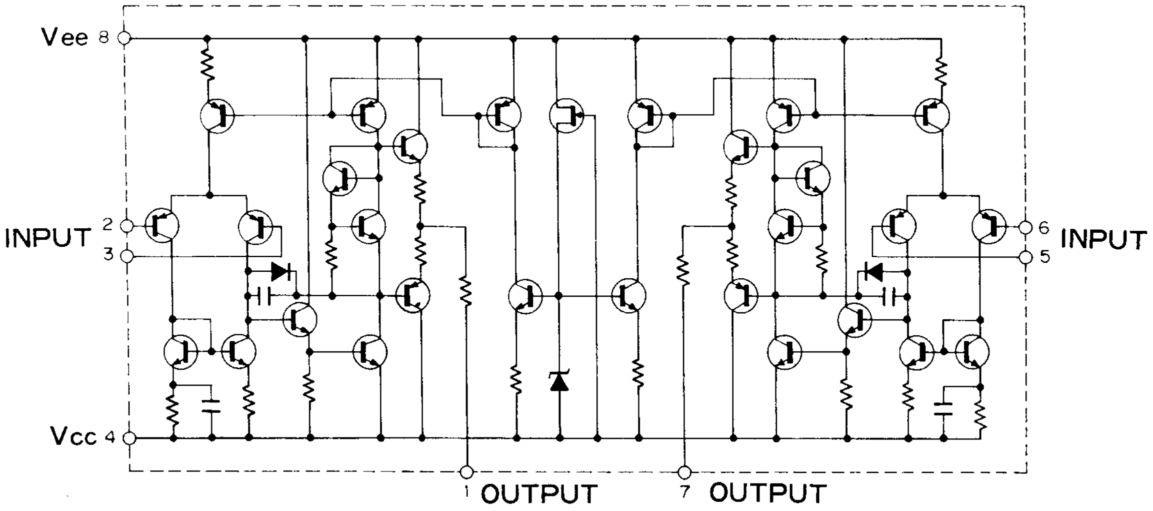
FUNCTIONAL BLOCK DIAGRAM


FM ANTENNA
FM FRONT END
C.F.
IC01 LA1222
IF AMP
C.F.
C.F.
IC02 LA1222
IF AMP
IC03 HA11225
IF AMP/QUADRATURE DET. IC/MUTING & METER CIRCUIT
AM ANTENNA
IC06 LA1240
AM CONV. IF AMP IC & CIRCUIT BLOCK
TUNING
L.E.D. DRIVE AMP
IC07 NJM4558
1
2
3
4
5
SIGNAL
PRE SCALER
IC01 MSL2318
COUNTER IC
IC02 MSM5525
FM 98.3 MHz
DIGITRON
L.P.F
FUNCTION SWITCH
PLL FM MULTIPLEX STEREO DEMODULATOR
IC04 LA3380
L.P.F
1/2 IC05 NJM4558
AF AMP
MPX NOISE FILTER
L
AF AMP
R
1/2 IC05 NJM4558

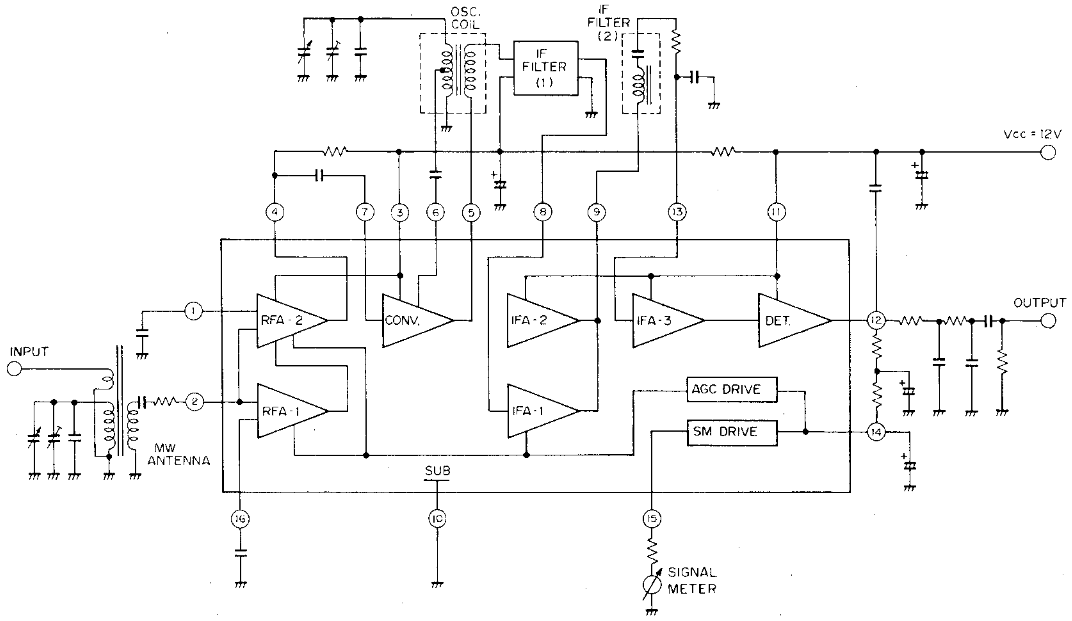
FM IF IC LA1222 EQUIVALENT CIRCUIT


8
7
6
5
4
R1
4K
Q1
Q3
Q4
1
Q2
Q8
2
Q5
Q6
R2
5K
Q7
3

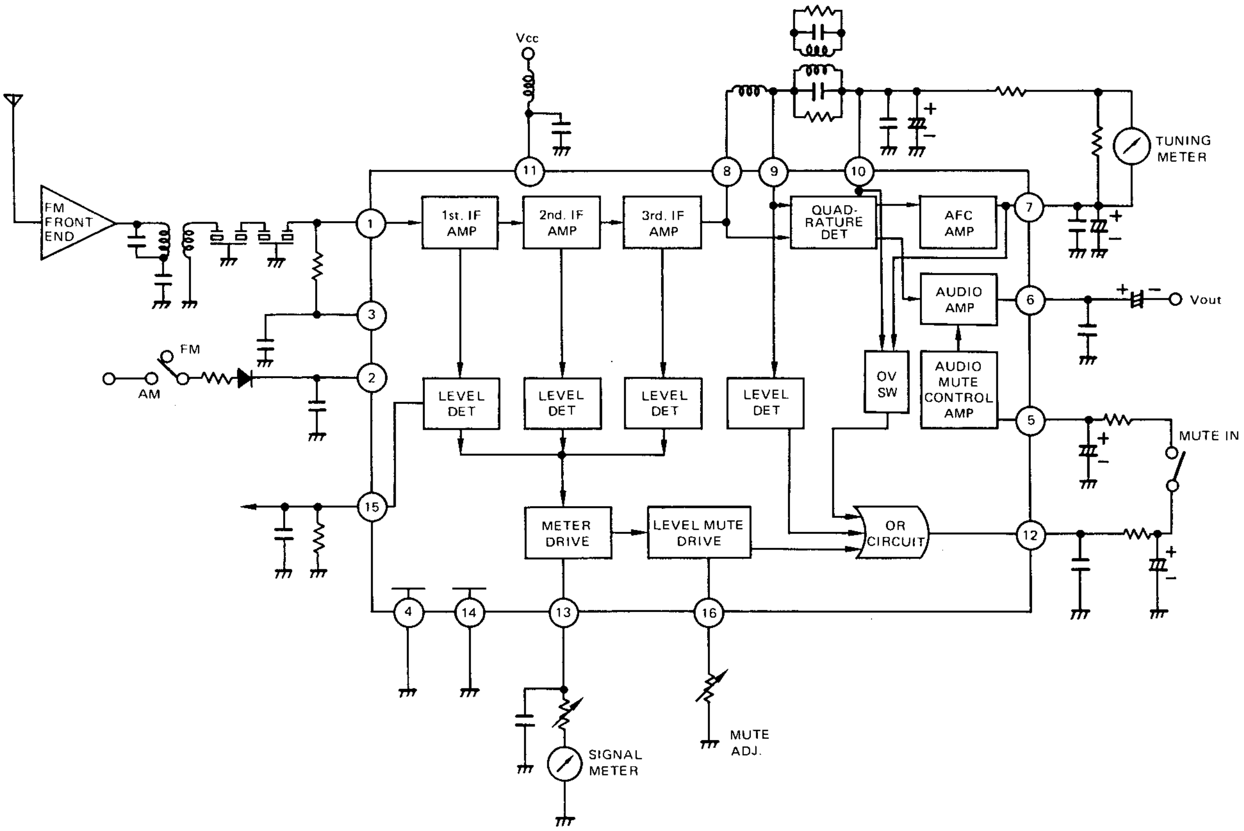
AF AMP NJM4558 EQUIVALENT CIRCUIT


Vee 8
INPUT 2
3
Vcc 4
6 INPUT
5
1 OUTPUT
7 OUTPUT

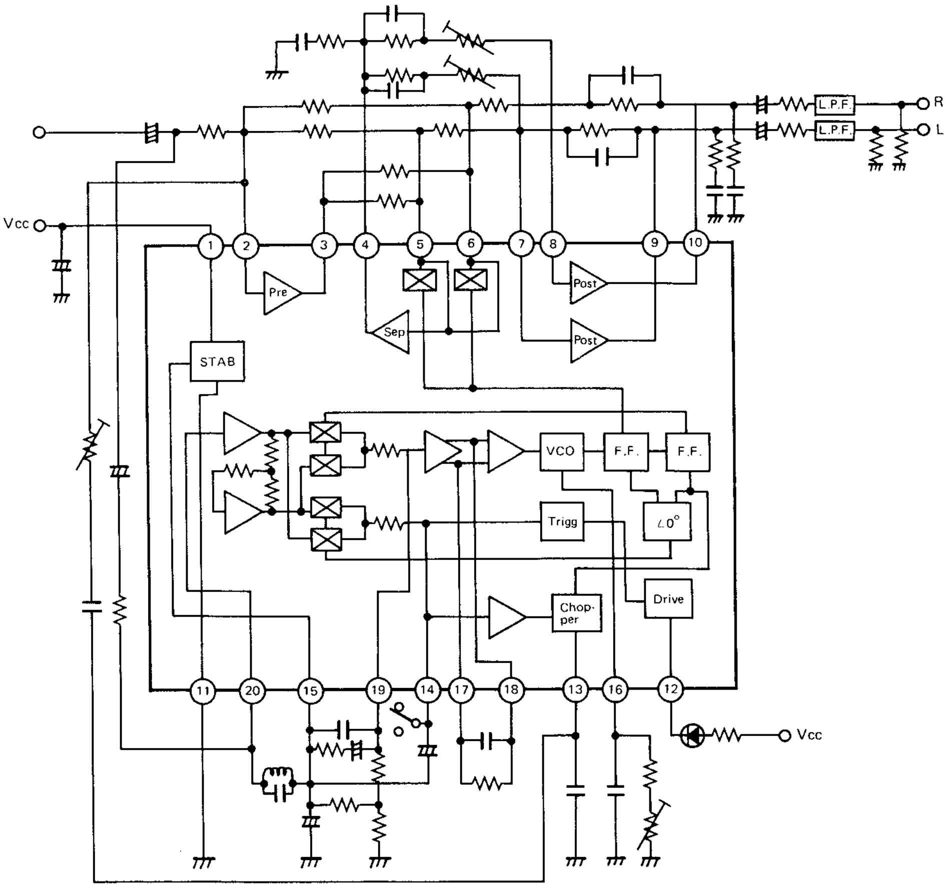
AM RF IF IC LA1240 SIGNAL FLOW


OSC. COIL
IF FILTER (2)
IF FILTER (1)
Vcc = 12V
4
7
3
6
5
8
9
13
11
OUTPUT
INPUT
1
RFA - 2
CONV.
IFA - 2
IFA - 3
DET.
12
2
RFA - 1
IFA - 1
AGC DRIVE
SM DRIVE
14
MW ANTENNA
SUB
16
10
15
SIGNAL METER

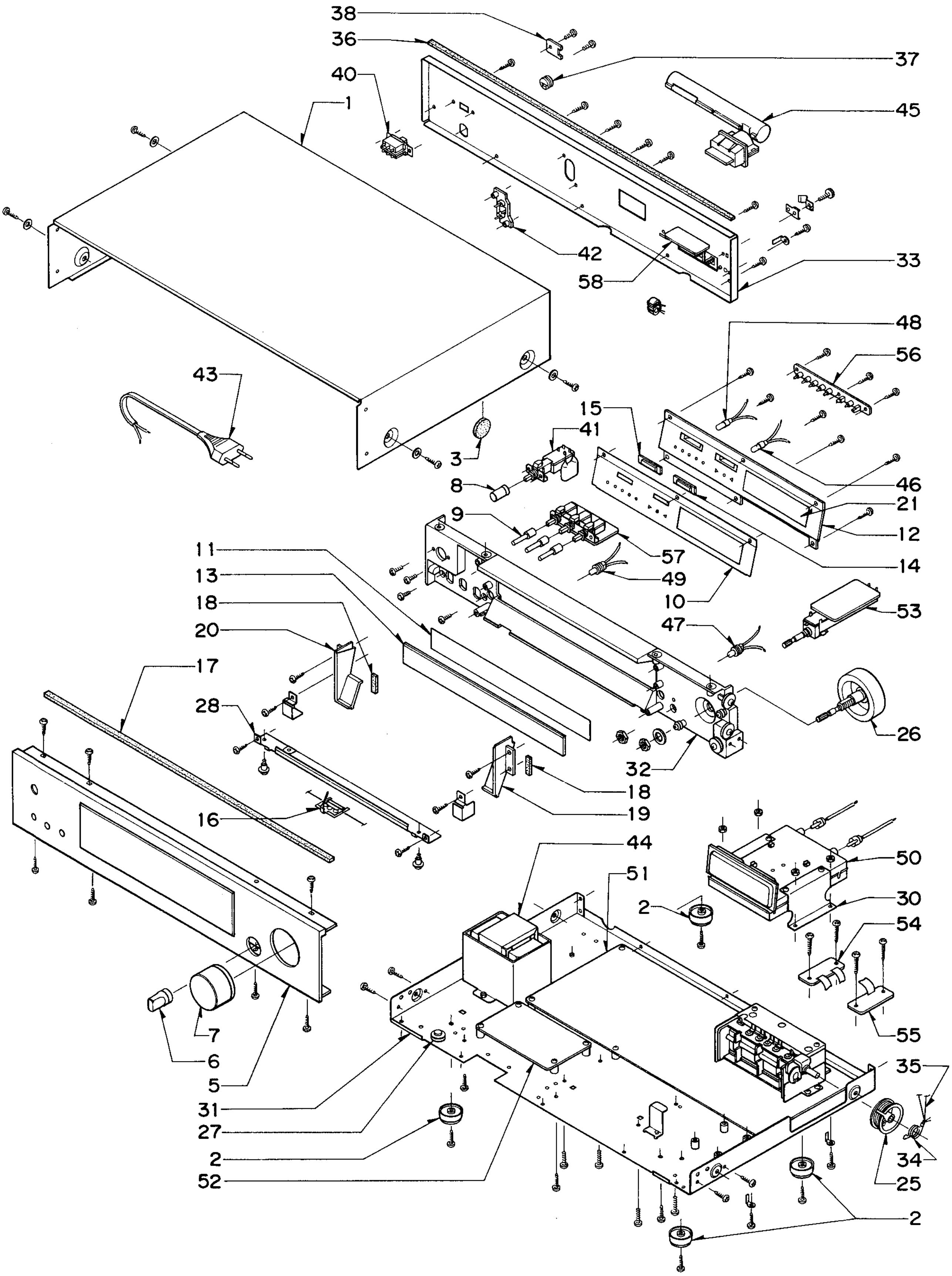
FM IF IC HA11225 SIGNAL FLOW


Vcc
FM FRONT END
1st. IF AMP
2nd. IF AMP
3rd. IF AMP
QUAD-RATURE DET
AFC AMP
AUDIO AMP
AUDIO MUTE CONTROL AMP
OV SW
LEVEL DET
LEVEL DET
LEVEL DET
LEVEL DET
METER DRIVE
LEVEL MUTE DRIVE
OR CIRCUIT
TUNING METER
Vout
MUTE IN
FM
AM
SIGNAL METER
MUTE ADJ.
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

FM MPX IC LA3380A SIGNAL FLOW


R
L
L.P.F
L.P.F
Vcc
Vcc
Pre
Sep
Post
Post
STAB
VCO
F.F.
F.F.
Trigg
∠0°
Chop-per
Drive
1
2
3
4
5
6
7
8
9
10
11
20
15
19
14
17
18
13
16
12

CABINET & CHASSIS EXPLODED VIEW


38
36
40
1
37
45
42
58
33
48
56
43
15
41
3
8
46
21
9
12
57
11
49
14
13
10
53
18
47
20
17
28
26
32
18
16
19
44
50
51
2
30
54
55
7
6
35
5
31
27
34
2
25
52
2

PARTS LIST

PACKING PARTS LIST

Ref. No.	Parts Number	Description
	131 6 1139 72426	Box Corrugate-EXP
	131 6 2119 01441	Bag Polyethylene-EXP
	131 6 3009 26910	Pad (Right, Left)

ACCESSORIES PARTS LIST

Ref. No.	Parts Number	Description
	131 2 1801 13900	Leg
	131 6 2719 10801	Bag Fan
	131 6 2719 11300	Bag Fan
	131 6 4119 80800	Explanatory Booklet
	131 6 4519 15700	Guarantee Certificate

CABINET PARTS LIST

Ref. No.	Parts Number	Description
1	131 2 1410 21501	Cover
2	131 2 1801 12900	Leg
3	131 2 1801 13900	Leg (Cover Inside Left, Right)

APPEARANCE PARTS LIST

Ref. No.	Parts Number	Description
5	131 0 1016 34700	Panel Decorate Assy (Silver)
	131 0 1016 34701	Panel Decorate Assy (Black)
6	131 0 1001 48000	Function Knob (Silver)
	131 0 1001 48003	Function Knob (Black)
7	131 0 1001 48200	Tuning Knob (Silver)
	131 0 1001 48207	Tuning Knob (Black)
8	131 0 1001 49000	Power Knob (Silver)
	131 0 1001 49003	Power Knob (Black)
9	131 0 1001 49900	Push Knob (Silver)
	131 0 1001 49903	Push Knob (Black)
10	131 2 1110 26500	Plate Decorate
11	131 2 1110 26600	Plate Decorate
12	131 2 1116 18400	Frame
13	131 2 1201 34500	Plate Dial
14	131 2 1503 12800	Decorate Sign
15	131 2 1503 14400	Decorate Sign
16	131 2 4101 21600	Pointer
17	131 2 5205 15300	Cushion (Panel Control Top)
18	131 2 5205 23200	Cushion
19	131 2 6113 36000	Shelter (Right)
20	131 2 6113 36100	Shelter (Left)
21	131 2 6308 18000	Filter

CHASSIS PARTS LIST

Ref. No.	Parts Number	Description
25	131 0 3002 11400	Drum Assy
26	131 0 3003 20600	Shaft Dial Assy
27	131 0 3020 11000	Pulley Assy
28	131 0 3020 11900	Pulley Assy
29	131 2 1410 22800	Cover
30	131 2 3101 68300	Metal Mount
31 *	131 2 3301 26500	Chassis
32 *	131 2 3305 27700	Panel Front
33 *	131 2 3306 31000	Panel Rear
34	131 2 4111 00500	Spring Rope
35	131 2 4112 10201	Rope 0.5 (BK)
36	131 2 5205 15300	Cushion
37	131 2 6111 14200	Bushing (AC Cord)
38	131 2 7104 00500	Plate Pad Switch (AC Selector)

ELECTRICAL PARTS LIST

Ref. No.	Parts Number	Description
40	4 2312 01020	Switch Slide
41	4 2312 02280	Switch Push Power
42	4 2359 23070	RCA 2P Jack
43	4 2439 20526	Power Cord
44	4 2512 11720	Power Transformer
45	4 2579 25210	Bar Antenna MW
46	4 6122 00440	Pilot Lamp (Stereo Ind. 6V 30mA)
47	4 6122 00620	Pilot Lamp (8V 200mA)
48	4 6122 00800	Pilot Lamp (Band Ind. 6.3V 80mA)
49	4 6122 01150	Pilot Lamp (8V 200mA)
50 *	131 0 4014 00102	Digital Unit Assy
51 *	131 0 4001 04350	RF/IF/MPX P.C.B. Assy
52 *	131 0 4001 04360	Power Supply P.C.B. Assy
53 *	131 0 4001 04370	Function P.C.B. Assy
54 *	131 0 4001 04380	Function Terminal A P.C.B. Assy
55 *	131 0 4001 04390	Function Terminal B P.C.B. Assy
56 *	131 0 4001 04400	Signal Ind. P.C.B. Assy
57 *	131 0 4001 04410	Switch Push P.C.B. Assy
58 *	131 0 4001 04420	Terminal Ant. P.C.B. Assy
C01,02	C2EHRM103A	Metallized Paper 0.01 µF 250V ±20%
C03	C1HYDZ473A	Ceramic 0.047 µF 50V +80,–20%

*–Not a service part.

FM TUNER ALIGNMENT

FM ALIGNMENT – FUNCTION switch to FM AUTO.

Maintain generator output as low as possible for suitable indications.

ITEM	GENERATOR	DIAL SETTING	INDICATOR	PROCEDURE
NOTE: The FM IF circuit utilizes a non-turnable ceramic filter which establishes the IF bandpass. To insure symmetrical tuning and selectivity, the IF must be aligned precisely to the center of the filter bandpass, rather than to 10.7 MHz as in conventional LC circuits.				
1. IF ALIGNMENT	Connect 10.7 MHz Sweep Generator to VC2 and, ground lead to chassis. Markers are not required. Set generator output to –12dB (250mV).	Position of non-interference	Scope vertical input to TP1, and connect ground lead to chassis. Set vertical sensitivity to 0.5V/cm.	Adjust FM IFT for maximum gain and best symmetry. See Figure 1 for FM IF ALIGNMENT.
2. PRELIMINARY DETECTOR ALIGNMENT	Generator connections are the same as above. Adjust for S-curve display. Set generator output to –20dB. (100mV)	Position of non-interference	Scope vertical input to TP2.	Adjust T01 for maximum gain. Adjust T02 for best linearity. See Figure 2 for FM DETECTOR ALIGNMENT. NOTE: Harmonic Distortion test must be performed as part of detector alignment.
NOTE: Connect 120-ohm composition resistors in series with each lead from the RF generator to match the 50-ohm output to the 300-ohm input impedance. Generator output voltage is reduced to one-half at antenna terminals. Signal voltages specified in this table are generator output levels, *not* antenna voltages.				
3. FRONT END ALIGNMENT		Tuning knob fully counterclockwise		Center dial pointer on "0" (zero) and cement
4. FRONT END ALIGNMENT (108 MHz)	Change generator setting to 108 MHz.	Center of 108 MHz calibration mark on dial	Same as above	Adjust TC3, TC2 and TC1 for maximum deflection on SIGNAL STRENGTH DISPLAY (M1) and zero deflection of M2. Reduce generator output to keep Field Strength meter indication at approximately 50%.
5. DC ADJUSTMENT			Connect VTVM across Pin 31 and Pin 38.	Adjust VR03 until VTVM reads 0V.
6. TUNING LED ADJUSMENT			Connect DC VTVM across Pin 20 and Ground.	Adjust VR08 until VTVM reads 0V.

FM TUNER ALIGNMENT (Continued)

—continued—

ITEM	GENERATOR	DIAL SETTING	INDICATOR	PROCEDURE
7. VCO ADJUSTMENT	Set generator to TUNER frequency. Modulate with 400 Hz ±75 kHz deviation. Connect generator to FM ANT terminals.	Tune TUNER to Position of non-interference.	Connect frequency counter to Pin 29. NOTE: Connect Buffer Amp of a high input impedance (over 500 k-ohm) to TP13 and then, to the frequency counter through 220 k-ohm.	Adjust VR05 in Multiplex circuit to obtain 76 kHz ±50 Hz on counter
8. PILOT CANCEL ADJUSTMENT	Set generator to TUNER frequency. Modulate with 19 kHz ±7.5 kHz deviation (Pilot Signal). Connect generator to FM ANT terminals.	Tune TUNER to Position of non-interference.	Scope vertical input to LEFT TUNER OUTPUT jack.	Adjust VR04 (100k) until deviation of levels (VTVM output) on R and L channels becomes minimum.
9. PILOT PHASE ADJUSTMENT	Same as above	Same as above	Scope vertical input to Pin 30.	Adjust T05 until the wave form in Fig. 3 appears.
10. FM STEREO SIGNAL SEPARATION CONTROL	(Band Selector Wide) Connect FM stereo SG to FM ANT terminals. 19 kHz signal ON. Main channel, sub channel signal ON. Apply 1000 Hz signal from L Ch.		Scope and AC-VTVM to RIGHT TUNER OUTPUT jack.	Adjust VR06 and VR07 for minimum output.
	(Band Selector Narrow) Same as above		Same as above	Adjust VR10 for minimum output.

AM TUNER ALIGNMENT

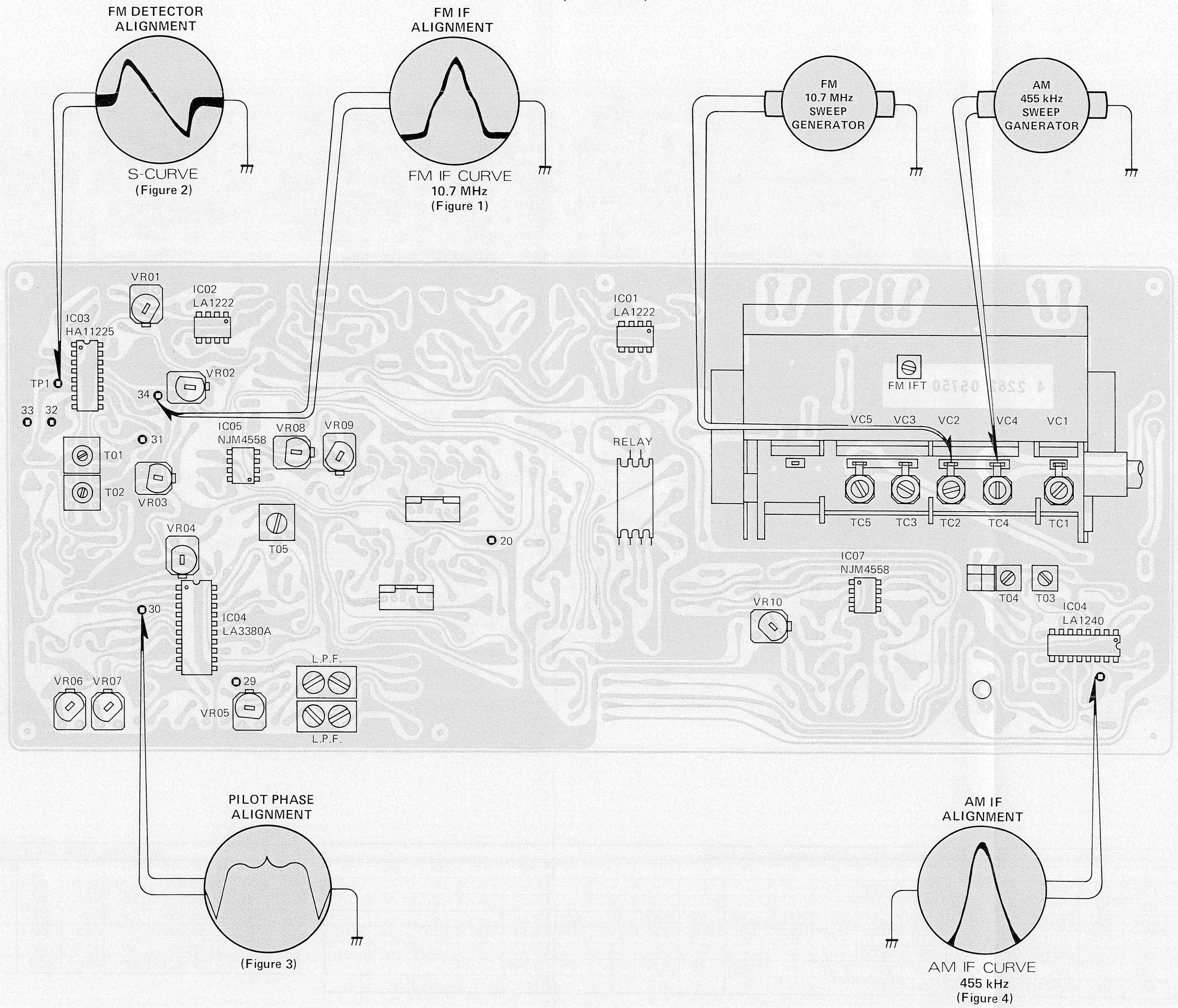
AM ALIGNMENT – FUNCTION switch to AM position.

Maintain generator output as low as possible for suitable indication.

ITEM	GENERATOR	AM DIAL SETTING	INDICATOR	PROCEDURE
1. IF ALIGNMENT	Connect 455 kHz sweep generator to VC4 and ground lead to chassis. Use 0.1 μF capacitor in series with generator lead.	Position of non-interference near 1400 kHz	Scope vertical input to Pin No.7 and ground lead to chassis. Set vertical sensitivity to 0.2 V/cm.	Adjust T04 for maximum gain and best symmetry. Keep signal low enough for noise on response as shown in Figure 4.
2. FRONT END ALIGNMENT (600 kHz)	AM generator to EXT AM ANT and GND terminals Set to 600 kHz. Modulate with 400 Hz (30% modulation).	Center of 600 kHz calibration mark on dial	Front panel signal strength display (M1)	Adjust T3 and AM Bar ANT for maximum Field Strength meter indication. Reduce generator output to keep meter reading below 50%.
3. FRONT END ALIGNMENT (1400 kHz)	Set to 1400 kHz.	Center of 1400 kHz calibration mark on dial	Front panel signal strength display (M1)	Adjust TC5 and TC2 for maximum deflection. Keep meter reading below 50%. Repeat steps 2 and 3 until optimum alignment is reached.

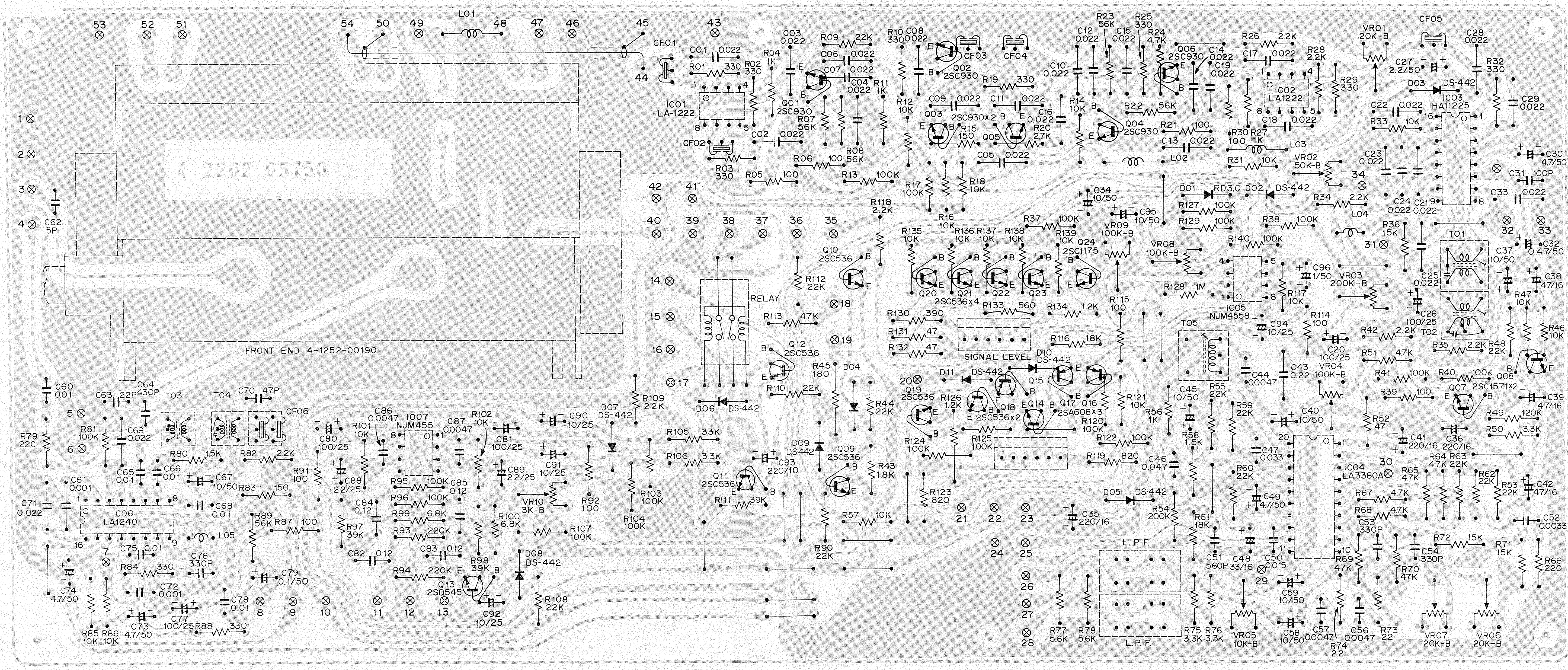
RF/IF/MPX P.C.BOARD LAYOUT

WITH OSCILLOSCOPE TIME BASE SETTINGS
(TOP VIEW)


FM DETECTOR ALIGNMENT
S-CURVE
(Figure 2)
FM IF ALIGNMENT
FM IF CURVE
10.7 MHz
(Figure 1)
FM 10.7 MHz SWEEP GENERATOR
AM 455 kHz SWEEP GANERATOR
VR01
IC02 LA1222
IC03 HA11225
IC01 LA1222
FM IFT
4 226 05750
VR02
TP1
34
33
32
31
VC5
VC3
VC2
VC4
VC1
IC05 NJM4558
VR08
VR09
T01
T02
VR03
RELAY
TC5
TC3
TC2
TC4
TC1
VR04
T05
20
IC07 NJM4558
T04
T03
IC04 LA1240
VR10
30
IC04 LA3380A
L.P.F.
29
VR06
VR07
VR05
L.P.F.
PILOT PHASE ALIGNMENT
(Figure 3)
AM IF ALIGNMENT
AM IF CURVE
455 kHz
(Figure 4)

RF/IF/MPX P.C.BOARD

(BOTTOM VIEW)



4 2262 05750
FRONT END 4-1252-00190
IC01 LA-1222
IC02 LA1222
IC03 HA11225
IC04 LA3380A
IC05 NJM4558
IC06 LA1240
IC07 NJM455
RELAY
SIGNAL LEVEL
L.P.F.
L.P.F.
CF01
CF02
CF03
CF04
CF05
CF06
T01
T02
T03
T04
T05
L01
L02
L03
L04
L05
Q01 2SC930
Q02 2SC930
Q03 2SC930x2
Q04 2SC930
Q06 2SC930
Q07 2SC1571x2
Q10 2SC536
Q12 2SC536
Q09 2SC536
Q11 2SC536
Q13 2SD545
Q19 2SC536
Q20 Q21 Q22 Q23 2SC536x4
Q24 2SC1175
Q15 Q16 Q17 2SA608x3
Q18 2SC536x2
VR01 20K-B
VR02 50K-B
VR03 200K-B
VR04 100K-B
VR05 10K-B
VR06 20K-B
VR07 20K-B
VR08 100K-B
VR09 100K-B
VR10 3K-B
D01 RD3.0
D02 DS-442
D03 DS-442
D04
D05 DS-442
D06 DS-442
D07 DS-442
D08 DS-442
D09 DS442
D10 DS-442
D11 DS-442

RF/IF/MPX P.C.BOARD IC PIN NUMBER VOLTAGES																					
SYMBOL No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC01	LA1222	1.3V	1.3V	0V	9.9V	12.3V	0V	11.5V	12.3V	—	—	—	—	—	—	—	—	—	—	—	—
IC02	LA1222	1.3V	0V	0V	0V	12.4V	1.3V	9.5V	12.4V	—	—	—	—	—	—	—	—	—	—	—	—
IC03	HA11225	2.0V	2.0V	2.0V	0V	0V	5.5V	5.7V	5.6V	5.6V	5.6V	13.5V	1.7V	2.0V	0V	4.6V	1.6V	—	—	—	—
IC04	LA3380	12.3V	4.1V	4.1V	4.1V	4.1V	4.1V	4.1V	4.1V	3.9V	3.9V	0V	–0.5V	4.4V	4.1V	4.1V	3.2V	7.7V	7.7V	4.1V	4.1V
IC05	NJM4558	0V	0V	0V	–13.4V	0V	0V	0V	13.2V	—	—	—	—	—	—	—	—	—	—	—	—
IC06	LA1240	0V	1.8V	0V	0V	0V	3.4V	1.3V	2.7V	9.4V	0V	12.8V	1.6V	0.7V	1.6V	0V	1.2V	—	—	—	—
IC07	NJM4558	0V	0V	0V	–13.4V	0V	0V	0V	13.2V	—	—	—	—	—	—	—	—	—	—	—	—

RF/IF/MPX P.C.BOARD TRANSISTOR DC VOLTAGE									
SYMBOL No.	DEVICE	B	C	E	SYMBOL No.	DEVICE	B	C	E
Q01	2SC930	6.2V	13.2V	0V	Q08	2SC1571	0.6V	5 7V	0V
Q02,03	2SC930	0V	0V	0V	Q09	2SC536	0V	0V	–0.5V
Q04	2SC930	0 8V	0V	0V	Q10	2SC536	0V	0V	0V
Q05	2SC930	0V	0V	0V	Q11	2SC536	0.6V	0V	0V
Q06	2SC930	0V	13.5V	0V	Q12	2SC536	0V	0V	0V
Q07	2SC1571	6.8V	13.0V	6.2V	Q13	2SD545	0.6V	0V	0V

PARTS LIST

RF/IF/MPX P.C.B. Assy
131 0 4001 04350

Ref. No.	Parts Number	Description
	4 1252 00190	Front End
	4 2329 20230	Relay Leed
	4 2362 00370	Plug 6P
	4 2552 00280	L.P. Filter
L01,02 03	4 2532 00150	RF Filter
L04	4 2532 00010	Choke Coil 2.2 μH
L05	4 2532 00020	Choke Coil 470 μH
	131 0 4015 00020	Ceramic Filter Assy
CF01,02	4 2272 00170	Ceramic Filter
CF03,04	4 2272 00140	Ceramic Filter
CF05	4 2272 00170	Ceramic Filter
CF06	4 2272 00030	Ceramic Filter
T01	4 2562 00290	FM IFT
T02	4 2562 00300	FM IFT
T03	4 2582 00050	OSC Coil AM
T04	4 2562 00040	IF Transformer AM
T05	4 2652 00010	MPX Coil
VR01	4 2222 01040	VR 20k-B
VR02	4 2222 01010	VR 50k-B
VR03	4 2222 01020	VR 200k-B
VR04	4 2222 00960	VR 100k-B
VR05	4 2222 01400	VR 10k-B
VR06,07	4 2222 01040	VR 20k-B
VR08,09	4 2222 00960	VR 100k-B
VR10	4 2222 01060	VR 3k-B

CAPACITORS

Ref. No.	Parts Number	Description
C01,02 03,04 05,06 07,08 09,10 11,12 13,14 15,16 17,18 19,	C1CCZN223YPA	Ceramic 0.022 μF 16V ±30%
C20	C1ERY-107APA	Electrolytic 100 μF 25V
C21,22 23,24 25	C1CCZN223YPA	Ceramic 0.022 μF 16V ±30%
C26	C1ERY-107APA	Electrolytic 100 μF 25V
C27	C1HRY-225LPA	Electrolytic 2.2 μF 50V
C28,29	C1CCZN223YPA	Ceramic 0.022 μF 16V ±30%
C30	C1HRY-475APA	Electrolytic 4.7 μF 50V
C31	C1HCYK101APA	Ceramic 100 pF 50V ±10%
C32	C1HRY-474APA	Electrolytic 0.47 μF 50V
C33	C1CCZN223YPA	Ceramic 0.022 μF 16V ±30%
C34	C1HRY-106APA	Electrolytic 10 μF 50V
C35,36	C1CRE-227A	Electrolytic 220 μF 16V
C37	C1HRY-106APA	Electrolytic 10 μF 50V
C38,39	C1CRY-476APA	Electrolytic 47 μF 16V
C40	C1HRY-106APA	Electrolytic 10 μF 50V
C41	C1CRE-227A	Electrolytic 220 μF 16V
C42	C1CRY-476APA	Electrolytic 47 μF 16V
C43	C1HFRM224A	Mylar 0.22 μF 50V ±20%
C44	C1HFYK472APA	Mylar 0.0047 μF 50V ±10%
C45	C1HRY-106APA	Electrolytic 10 μF 50V
C46	C1HFYK473APA	Mylar 0.047 μF 50V ±10%
C47	C1HFYK333APA	Mylar 0.033 μF 50V ±10%
C48	C1CRY-336APA	Electrolytic 33 μF 16V
C49	C1HRY-475APA	Electrolytic 4.7 μF 50V
C50	C1HFYK153APA	Mylar 0.015 μF 50V ±10%
C51	C1HSYJ561APA	Styrol 560 pF 50V ±5%
C52	C1HFYK332APA	Mylar 0.0033 μF 50V ±10%
C53,54	C1HCYK331APA	Ceramic 330 pF 50V ±10%
C56,57	C1HFYK472APA	Mylar 0.0047 μF 50V ±10%
C58,59	C1HRY-106APA	Electrolytic 10 μF 50V
C60	C1HFYK103APA	Mylar 0.01 μF 50V ±10%
C61	C1HCZM102DPA	Ceramic 1000 pF 50V ±20%
C63	C1HCDK220SH	Ceramic 22 pF 50V ±10%
C64	C1HSEJ431A	Styrol 430 pF 50V ±5%
C65,66	C1HFYK103APA	Mylar 0.01 μF 50V ±10%
C67	C1HRY-106APA	Electrolytic 10 μF 50V
C68	C1HFYK103APA	Mylar 0.01 μF 50V ±10%
C69	C1CCZN223YPA	Ceramic 0.022 μF 16V ±30%
C70	C1HCYK470APA	Ceramic 47 pF 50V ±10%
C71	C1CCZN223YPA	Ceramic 0.022 μF 16V ±30%
C72	C1HFYK102APA	Mylar 0.001 μF 50V ±10%
C73,74	C1HRY-475APA	Electrolytic 4.7 μF 50V
C75	C1HFYK103APA	Mylar 0.01 μF 50V ±10%
C76	C1HCYK331APA	Ceramic 330 pF 50V ±10%
C77	C1ERY-107APA	Electrolytic 100 μF 25V
C78	C1HFYK103APA	Mylar 0.01 μF 50V ±10%
C79	C1HRY-104LPA	Electrolytic 0.1 μF 50V
C80,81	C1ERY-107APA	Electrolytic 100 μF 25V
C82,83 84,85	C1HFRK124A	Mylar 0.12 μF 50V ±10%
C86,87	C1HFYK472APA	Mylar 0.0047 μF 50V ±10%
C88,89	C1ERY-226APA	Electrolytic 22 μF 25V
C90,91 92	C1ERY-106APA	Electrolytic 10 μF 25V
C93	C1ARY-227APA	Electrolytic 220 μF 10V
C94,95	C1ERY-106APA	Electrolytic 10 μF 25V
C96	C1HRY-105LPA	Electrolytic 1 μF 50V

SEMICONDUCTORS

Ref. No.	Parts Number	Description
D01	DNN-RD3.0E--B	Zener Diode, RD3.0E
D02,03 04,05 06,07 08,09 10,11	205 5 9040 44210	Diode, DS-442
IC01,02	206 5 0131 22210	IC, LA1222
IC03	IKK-HA11225	IC, HA11225
IC04	206 5 0493 38011	IC, LA3380A
IC05	IJJ-NJM4558DX	IC, NJM4558D
IC06	206 5 0171 24010	IC, LA1240
IC07	IJJ-NJM4558DX	IC, NJM4558D
Q01,02 03,04 05,06	203 5 5500 93060	TR 2SC930 F, E
Q07,08	203 5 5251 57189	TR 2SC1571 HL, GL
Q09,10 11,12	203 5 5000 53660	TR 2SC536 F, E
Q13	203 5 6870 54566	TR 2SD545 F, E
Q14	203 5 5000 53660	TR 2SC536 F, E

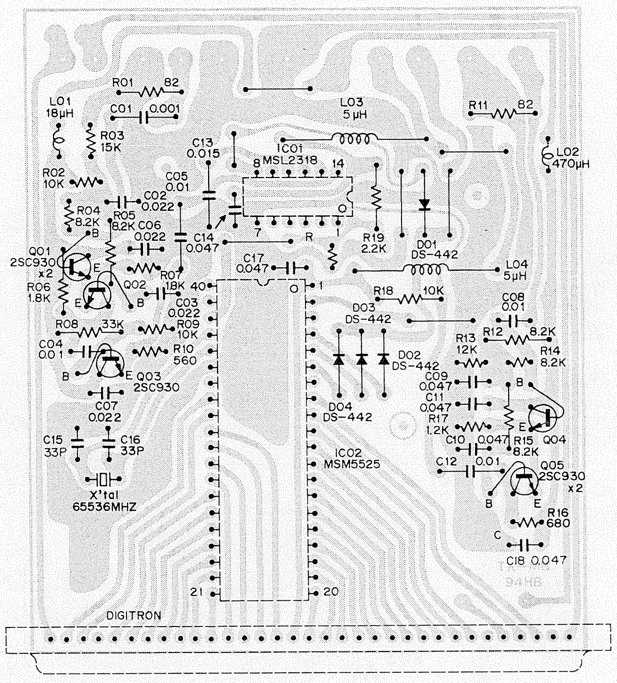
PARTS LIST (Continued)

Ref. No.	Parts Number	Descripiton			
	SEMICONDUCTORS				
Q15,16 17	203 5 7230 60860	TR 2SA608 F, E			
Q18,19 20,21 22,23	203 5 5000 53660	TR 2SC536 F, E			
Q24	203 5 6711 17560	TR 2SC1175 F, E			
	RESISTORS				
R01,02 03	R2EDZJ331APA	Carbon	330	1/4W	±5%
R04	R2EDZJ102APA	Carbon	1k	1/4W	±5%
R05,06	R2EDZJ101APA	Carbon	100	1/4W	±5%
R07,08	R2EDZJ563APA	Carbon	56k	1/4W	±5%
R09	R2EDZJ222APA	Carbon	2.2k	1/4W	±5%
R10	R2EDZJ331APA	Carbon	330	1/4W	±5%
R11	R2EDZJ102APA	Carbon	1k	1/4W	±5%
R12	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R13	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R14	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R15	R2EDZJ151APA	Carbon	150	1/4W	±5%
R16	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R17	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R18	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R19	R2EDZJ331APA	Carbon	330	1/4W	±5%
R20	R2EDZJ272APA	Carbon	2.7k	1/4W	±5%
R21	R2EDZJ101APA	Carbon	100	1/4W	±5%
R22,23	R2EDZJ563APA	Carbon	56k	1/4W	±5%
R24	R2EDZJ472APA	Carbon	4.7k	1/4W	±5%
R25	R2EDZJ331APA	Carbon	330	1/4W	±5%
R26	R2EDZJ222APA	Carbon	2.2k	1/4W	±5%
R27	R2EDZJ102APA	Carbon	1k	1/4W	±5%
R28	R2EDZJ222APA	Carbon	2.2k	1/4W	±5%
R29	R2EDZJ331APA	Carbon	330	1/4W	±5%
R30	R2EDZJ101APA	Carbon	100	1/4W	±5%
R31	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R32	R2EDZJ331APA	Carbon	330	1/4W	±5%
R33	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R34,35	R2EDZJ222APA	Carbon	2.2k	1/4W	±5%
R36	R2EDZJ153APA	Carbon	15k	1/4W	±5%
R37,38	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R39	R2EDZJ101APA	Carbon	100	1/4W	±5%
R40,41	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R42	R2EDZJ222APA	Carbon	2.2k	1/4W	±5%
R43	R2EDZJ182APA	Carbon	1.8k	1/4W	±5%
R44	R2EDZJ223APA	Carbon	22k	1/4W	±5%
R45	R2HXBJ181A	Oxide Metal Film	180	1/2W	±5%
R46,47	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R48	R2EDZJ223APA	Carbon	22k	1/4W	±5%
R49	R2EDZJ124APA	Carbon	120k	1/4W	±5%
R50	R2EDZJ332APA	Carbon	3.3k	1/4W	±5%
R51	R2EDZJ472APA	Carbon	4.7k	1/4W	±5%
R52	R2EDPJ470A	Carbon	47	1/4W	±5%
R53	R2EDZJ223APA	Carbon	22k	1/4W	±5%
R54	R2EDZJ224APA	Carbon	220k	1/4W	±5%
R55	R2EDZJ222APA	Carbon	2.2k	1/4W	±5%
R56	R2EDZJ102APA	Carbon	1k	1/4W	±5%
R57	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R58	R2EDZJ152APA	Carbon	1.5k	1/4W	±5%
R59,60	R2EDZJ223APA	Carbon	22k	1/4W	±5%
R61	R2EDZJ183APA	Carbon	18k	1/4W	±5%

Ref. No.	Parts Number	Description			
	RESISTORS				
R62,63	R2EDZJ223APA	Carbon	22k	1/4W	±5%
R64,65	R2EDZJ472APA	Carbon	4.7k	1/4W	±5%
R66	R2EDZJ221APA	Carbon	220	1/4W	±5%
R67,68	R2EDZJ472APA	Carbon	4.7k	1/4W	±5%
R69,70	R2EDZJ473APA	Carbon	47k	1/4W	±5%
R71,72	R2EDZJ153APA	Carbon	15k	1/4W	±5%
R73,74	R2EDZJ220APA	Carbon	22	1/4W	±5%
R75,76	R2EDZJ332APA	Carbon	3.3k	1/4W	±5%
R77,78	R2EDZJ562APA	Carbon	5.6k	1/4W	±5%
R79	R2EDZJ221APA	Carbon	220	1/4W	±5%
R80	R2EDZJ152APA	Carbon	1.5k	1/4W	±5%
R81	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R82	R2EDZJ222APA	Carbon	2.2k	1/4W	±5%
R83	R2EDZJ151APA	Carbon	150	1/4W	±5%
R84	R2EDZJ331APA	Carbon	330	1/4W	±5%
R85,86	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R87	R2EDZJ101APA	Carbon	100	1/4W	±5%
R88	R2EDZJ331APA	Carbon	330	1/4W	±5%
R89	R2EDZJ563APA	Carbon	56k	1/4W	±5%
R90	R2EDZJ223APA	Carbon	22k	1/4W	±5%
R91,92	R2EDZJ101APA	Carbon	100	1/4W	±5%
R93,94	R2EDZJ224APA	Carbon	220k	1/4W	±5%
R95,96	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R97,98	R2EDZJ393APA	Carbon	39k	1/4W	±5%
R99,100	R2EDZJ682APA	Carbon	6.8k	1/4W	±5%
R101,102	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R103,104	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R105,106	R2EDZJ332APA	Carbon	3.3k	1/4W	±5%
R107	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R108,109 110	R2EDZJ223APA	Carbon	22k	1/4W	±5%
R111	R2EDZJ393APA	Carbon	39k	1/4W	±5%
R112	R2EDZJ223APA	Carbon	22k	1/4W	±5%
R113	R2EDZJ473APA	Carbon	47k	1/4W	±5%
R114,115	R2EDZJ101APA	Carbon	100	1/4W	±5%
R116	R2EDZJ183APA	Carbon	18k	1/4W	±5%
R117	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R118	R2EDZJ222APA	Carbon	2.2k	1/4W	±5%
R119	R2EDZJ821APA	Carbon	820	1/4W	±5%
R120	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R121	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R122	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R123	R2EDZJ821APA	Carbon	820	1/4W	±5%
R124,125	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R126	R2HXBJ122A	Oxide Metal Film	1.2k	1/2W	±5%
R127	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R128	R2EDZJ105APA	Carbon	1M	1/4W	±5%
R129	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R130	R2EDZJ391APA	Carbon	390	1/4W	±5%
R131,132	R2EDZJ470APA	Carbon	47	1/4W	±5%
R132	R2EDZJ471APA	Carbon	470	1/4W	±5%
R133	R2EDZJ561APA	Carbon	560	1/4W	±5%
R134	R2EDZJ122APA	Carbon	1.2k	1/4W	±5%
R135,136 137,138 139	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R140	R2EDZJ104APA	Carbon	100k	1/4W	±5%
R141	R2EDZJ103A	Carbon	10k	1/4W	±5%

COUNTER P.C.BOARD

(BOTTOM VIEW)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L01 18μH
C01 0.001
R03 15K
R02 10K
C13 0.015
IC01 MSL2318
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14
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R
1
L03 5μH
R11 82
L02 470μH
C05 0.01
C02 0.022
R04 8.2K
R05 8.2K
C06 0.022
C14 0.047
R19 2.2K
D01 DS-442
Q01 2SC930 x2
B
E
R06 1.8K
R07 18K
Q02
C17 0.047
L04 5μH
40
1
C03 0.022
R18 10K
D03 DS-442
C08 0.01
R08 33K
R09 10K
R13 12K
R12 8.2K
R14 8.2K
C04 0.01
R10 560
D02 DS-442
Q03 2SC930
C09 0.047
C11 0.047
C07 0.022
D04 DS-442
R17 1.2K
C10 0.047
R15 8.2K
Q04
C15 33P
C16 33P
IC02 MSM5525
C12 0.01
Q05 2SC930 x2
X'tal 65536MHZ
R16 680
C
C18 0.047
21
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DIGITRON

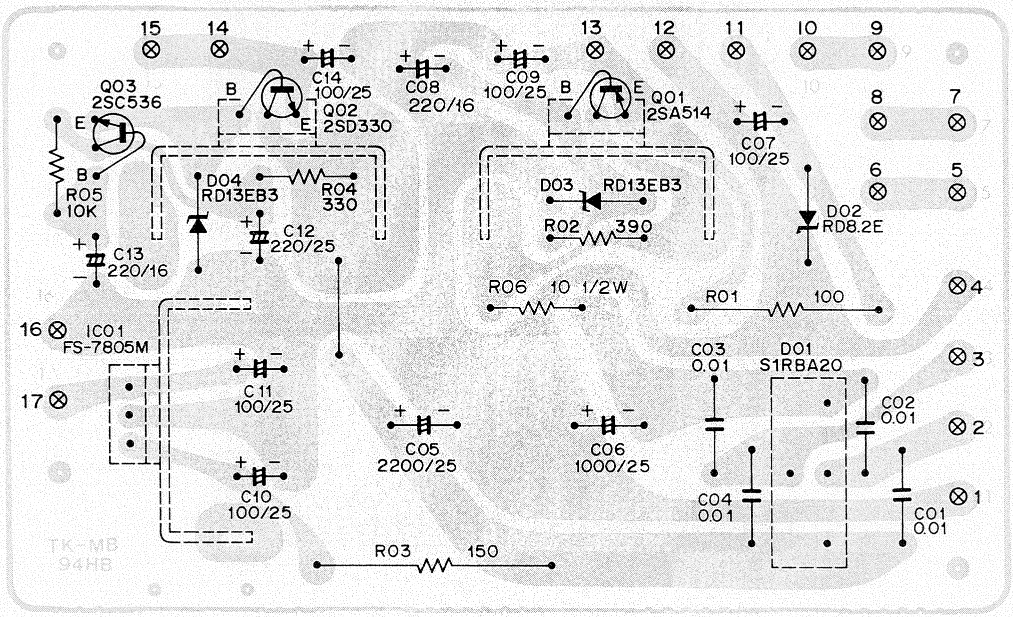
PARTS LIST

DIGITAL UNIT Assy
131 0 4014 00102

Ref. No.	Parts Number	Description
	131 0 3018 00401	Cover Shield Assy
	4 2352 00410	RCA Socket 1P
	131 2 6103 18001	Cover Shield
C01,02 03,04 05,06 07	4 2232 00210	Ceramic 1000 pF 50V
	131 0 4001 02161	Counter P.C.B. Assy
	4 2142 00010	Digitron
	4 2252 00040	Crystal OSC
L01	4 2532 00030	Choke Coil 18 μH
L02	4 2532 00020	Choke Coil 470 μH
L03,04	4 2539 20210	Choke Coil 5 μH
	CAPACITORS	
C01	C1HCZK102BPA	Ceramic 1000 pF 50V ±10%
C02,03	C1HYSZ223A	Ceramic 0.0022 μF 50V +80,–20%
C04	C1HYSZ103A	Ceramic 0.01 μF 50V +80,–20%
C05	C1ECZN153XPA	Ceramic 15000 pF 25V ±30%
C06,07	C1HYSZ223A	Ceramic 0.022 μF 50V +80,–20%
C08	C1HYSZ103A	Ceramic 0.01 μF 50V +80,–20%
C09,10 11	C1HYSZ473A	Ceramic 0.047 μF 50V +80,–20%
C12	C1HYSZ103A	Ceramic 0.01 μF 50V +80,–20%
C13	C1ECZN153XPA	Ceramic 15000 pF 25V ±30%
C14	C1HYSZ473A	Ceramic 0.047 μF 50V +80,–20%
C15,16	C1HCSK330SL	Ceramic 33 pF 50V ±10%
C17	C1HYSZ473A	Ceramic 0.047 μF 50V +80,–20%

Ref. No.	Parts Number	Description			
	SEMICONDUCTORS				
D01,03 04	205 5 9040 44210	Diode, DS-442			
IC01	IPP-MSL-2318	IC, MSL-2318			
IC02	IPP-MSM-5525	IC, MSM-5525			
Q01,02 03	203 5 5500 93040	TR 2SC930 D, E			
Q04,05	203 5 5000 53660	TR 2SC536 F, G			
	RESISTORS				
R01	R2EDZJ820APA	Carbon	82	1/4W	±5%
R02	R2EDUJ103A	Carbon	10k	1/4W	±5%
R03	R2EDUJ153A	Carbon	15k	1/4W	±5%
R04	R2EDUJ822A	Carbon	8.2k	1/4W	±5%
R05	R2EDZJ822APA	Carbon	8.2k	1/4W	±5%
R06	R2EDZJ182APA	Carbon	1.8k	1/4W	±5%
R07	R2EDUJ182A	Carbon	1.8k	1/4W	±5%
R08	R2EDZJ333APA	Carbon	33k	1/4W	±5%
R09	R2EDUJ103A	Carbon	10k	1/4W	±5%
R10	R2EDUJ561A	Carbon	560	1/4W	±5%
R12	R2EDZJ822APA	Carbon	8.2k	1/4W	±5%
R13	R2EDUJ123A	Carbon	12k	1/4W	±5%
R14	R2EDUJ822A	Carbon	8.2k	1/4W	±5%
R15	R2EDZJ822APA	Carbon	8.2k	1/4W	±5%
R16,17	R2EDUJ821A	Carbon	820	1/4W	±5%
R18	R2EDZJ103APA	Carbon	10k	1/4W	±5%
R19	R2EDZJ222APA	Carbon	2.2k	1/4W	±5%

POWER SUPPLY P.C.BOARD
(BOTTOM VIEW)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16
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Q03
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E
B
R05
10K
C13
220/16
C14
100/25
Q02
2SD330
B
E
C08
220/16
C09
100/25
Q01
2SA514
C07
100/25
D04
RD13EB3
R04
330
C12
220/25
D03
RD13EB3
R02
390
D02
RD8.2E
R06
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R01
100
IC01
FS-7805M
C11
100/25
C10
100/25
C05
2200/25
C06
1000/25
C03
0.01
D01
S1RBA20
C02
0.01
C04
0.01
C01
0.01
R03
150
TK-MB
94HB

TRANSISTOR DC VOLTAGE				
SYMBOL No.	DEVICE	B	C	E
Q01	2SB514	–14.3V	–23.6V	–13.7V
Q02	2SD330	14.2V	21.9V	13.6V
Q03	2SC536	14.8V	20.0V	14.2V

PARTS LIST

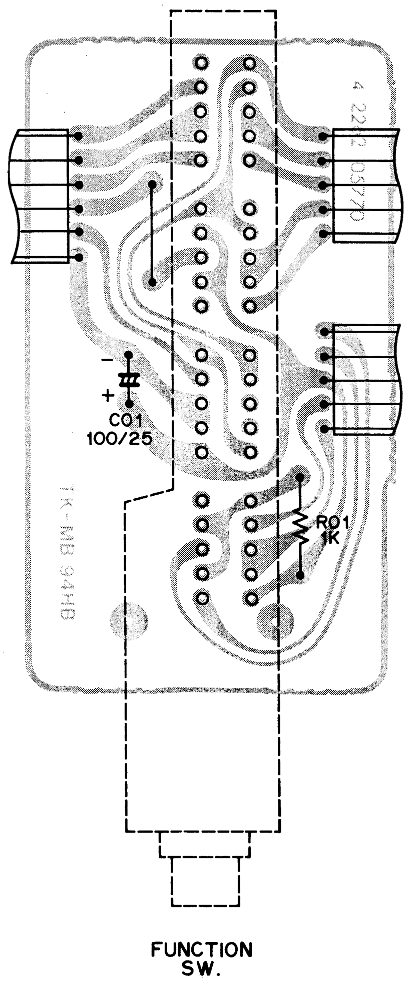
POWER SUPPLY P.C.B. Assy
131 0 4001 04360

Ref. No.	Parts Number	Description
	131 2 6201 21500	Plate Heat Sink
	CAPACITORS	
C01,02 03,04	C2HYDP103A	Ceramic 0.01 μF 500V +100,–0%
C05	C1ERE-228A	Electrolytic 2200 μF 25V
C06	C1ERE-108A	Electrolytic 1000 μF 25V
C07	C1ERY-107APA	Electrolytic 100 μF 25V
C08	C1CRE-227A	Electrolytic 220 μF 16V
C09,10 11	C1ERY-107APA	Electrolytic 100 μF 25V
C12	C1ERE-227A	Electrolytic 220 μF 25V
C13	C1CRE-227A	Electrolytic 220 μF 16V
C14	C1ERY-107APA	Electrolytic 100 μF 25V

Ref. No.	Parts Number	Descripiton
	SEMICONDUCTORS	
D01	DDD-S1RBA20	Bridge Diode, S1RBA20
D02	DNN-RD8.2E	Diode, RD8.2E
D03,04	DNN-RD13EB3	Diode, RD-13EB3
IC01	IAA-FS-7805M	IC, FS-7805M
Q01	203 5 8530 51450	TR 2SB514 E, F
Q02	203 5 8570 33050	TR 2SD330 E, F
Q03	203 5 5000 53670	TR 2SC536 G, F
	RESISTORS	
R01	R3AXBJ101A	Oxide Metal Film 100 1W ±5%
R02	R2EDZJ391APA	Carbon 390 1/4W ±5%
R03	R3DXBJ151A	Oxide Metal Film 150 2W ±5%
R04	R2EDZJ331APA	Carbon 330 1/4W ±5%
R05	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R06	R2HZPK100A	Fuse 10 1/2W ±5%

FUNCTION P.C.BOARD
(BOTTOM VIEW)

FUNCTION TERMINAL A P.C.BOARD
(BOTTOM VIEW)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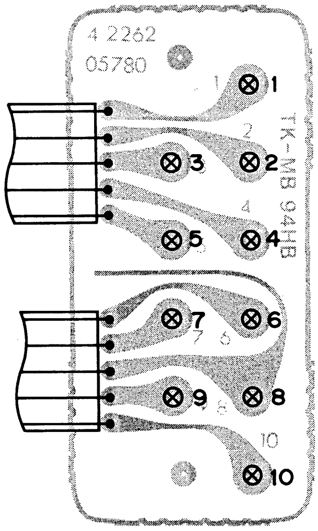
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TK-MB 94HB

PARTS LIST

FUNCTION P.C.B. Assy
131 0 4001 04370

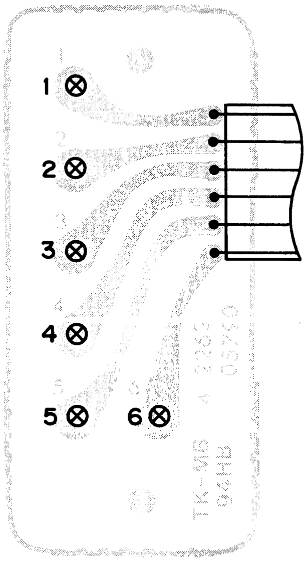
Ref. No.	Parts Number	Description
	4 2312 03980	Switch Rotary 8-3
	CAPACITORS	
C01	C1ERY-107APA	Electrolytic 100 μF 25V
	RESISTORS	
R01	R2EDZJ102APA	Carbon 1k 1/4W ±5%

FUNCTION TERMINAL A P.C.B. Assy
131 0 4001 04380

Ref. No.	Parts Number	Description
	111 2 6220 11100	Wire Wrap Terminal

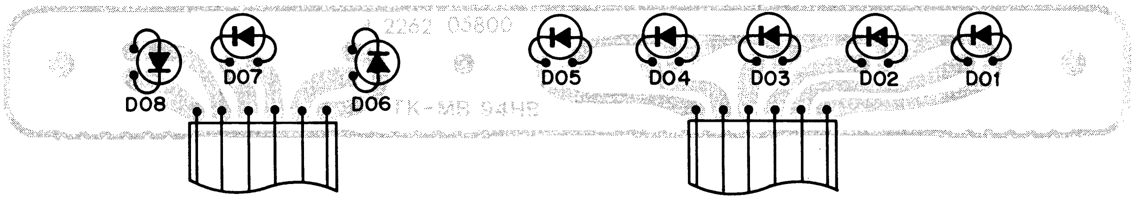
FUNCTION TERMINAL B P.C.BOARD

(BOTTOM VIEW)


1
2
3
4
5
6
TK-MB 94HB

SIGNAL IND P.C.BOARD

(BOTTOM VIEW)


D08
D07
D06
D05
D04
D03
D02
D01
TK-MB 94HB

PARTS LIST

FUNCTION TERMINAL B P.C.B. Assy
131 0 4001 04390

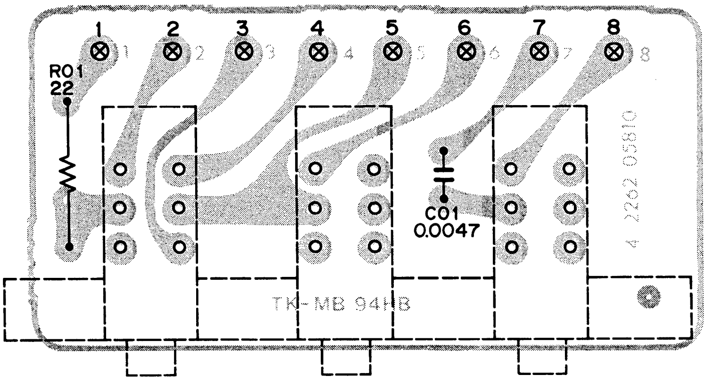
Ref. No.	Parts Number	Description
	111 2 6220 11100	Wire Wrap Terminal

SIGNAL IND. P.C.B. Assy
131 0 4001 04400

Ref. No.	Parts Number	Description
	SEMICONDUCTORS	
D01,02 03,04 05	DTT-TLR206	Diode, TLR206 (L.E.D.)
D06	DTT-TLR207	Diode, TLR207 (L.E.D.)
D07	DTT-TLG206	Diode, TLG206 (L.E.D.)
D08	DTT-TLR207	Diode, TLR207 (L.E.D.)

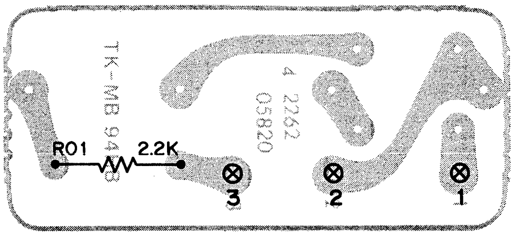
SWITCH PUSH P.C.BOARD

(BOTTOM VIEW)


1
2
3
4
5
6
7
8
R01
22
C01
0.0047
TK-MB 94HB
4 2262 05810

TERMINAL ANT P.C.BOARD

(BOTTOM VIEW)


TK-MB 94HB
4 2262 05820
R01
2.2K
3
2
1

PARTS LIST

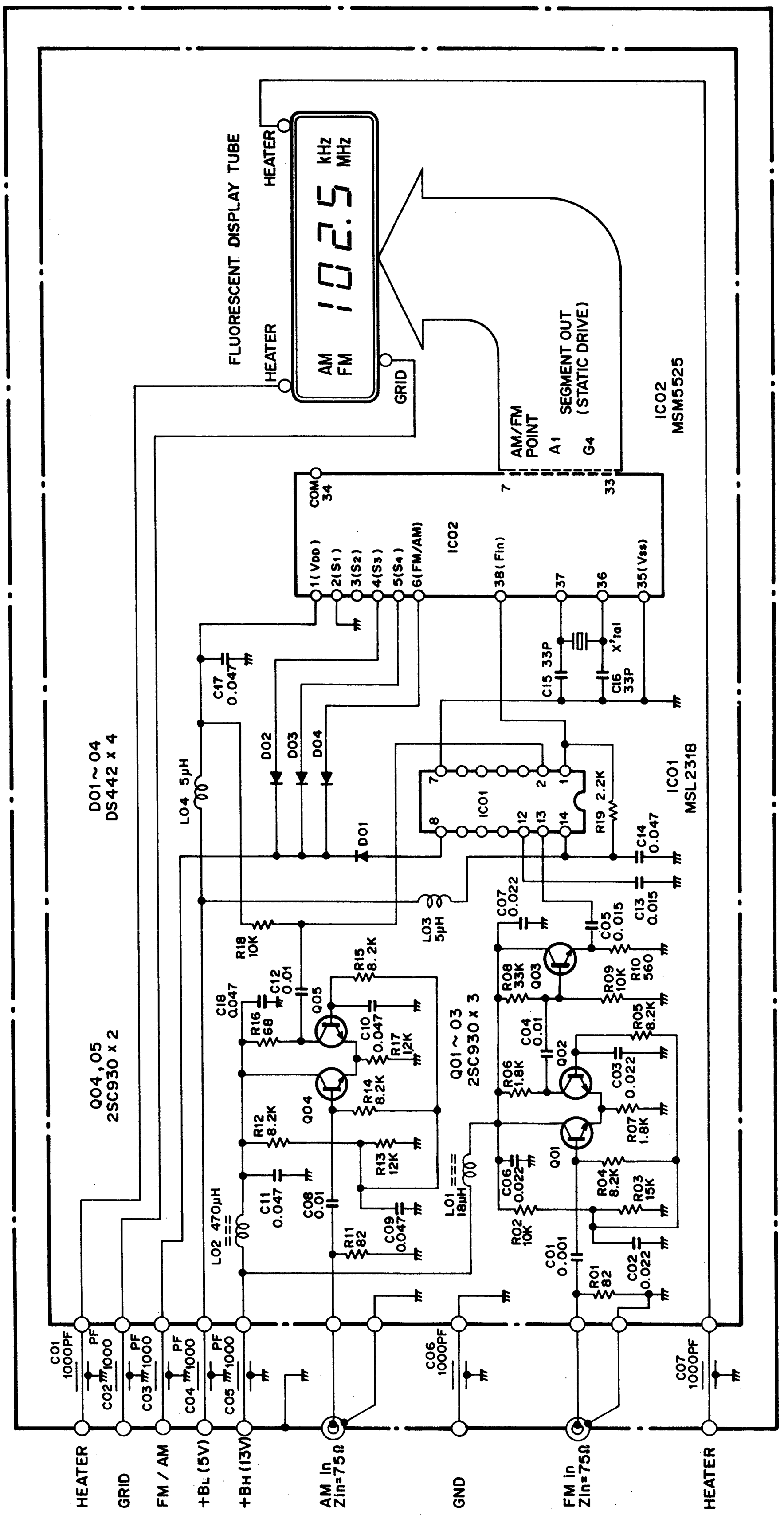
SWITCH PUSH P.C.B. Assy
131 0 4001 04410

Ref. No.	Parts Number	Description
	4 2312 03970	Switch Push 3key
	CAPACITORS	
C01	C1HFYK472APA	Mylar 0.0047 μF 50V ±10%
	RESISTORS	
R01	R2HXBJ220A	Oxide Metal Film 22 1/2W ±5%

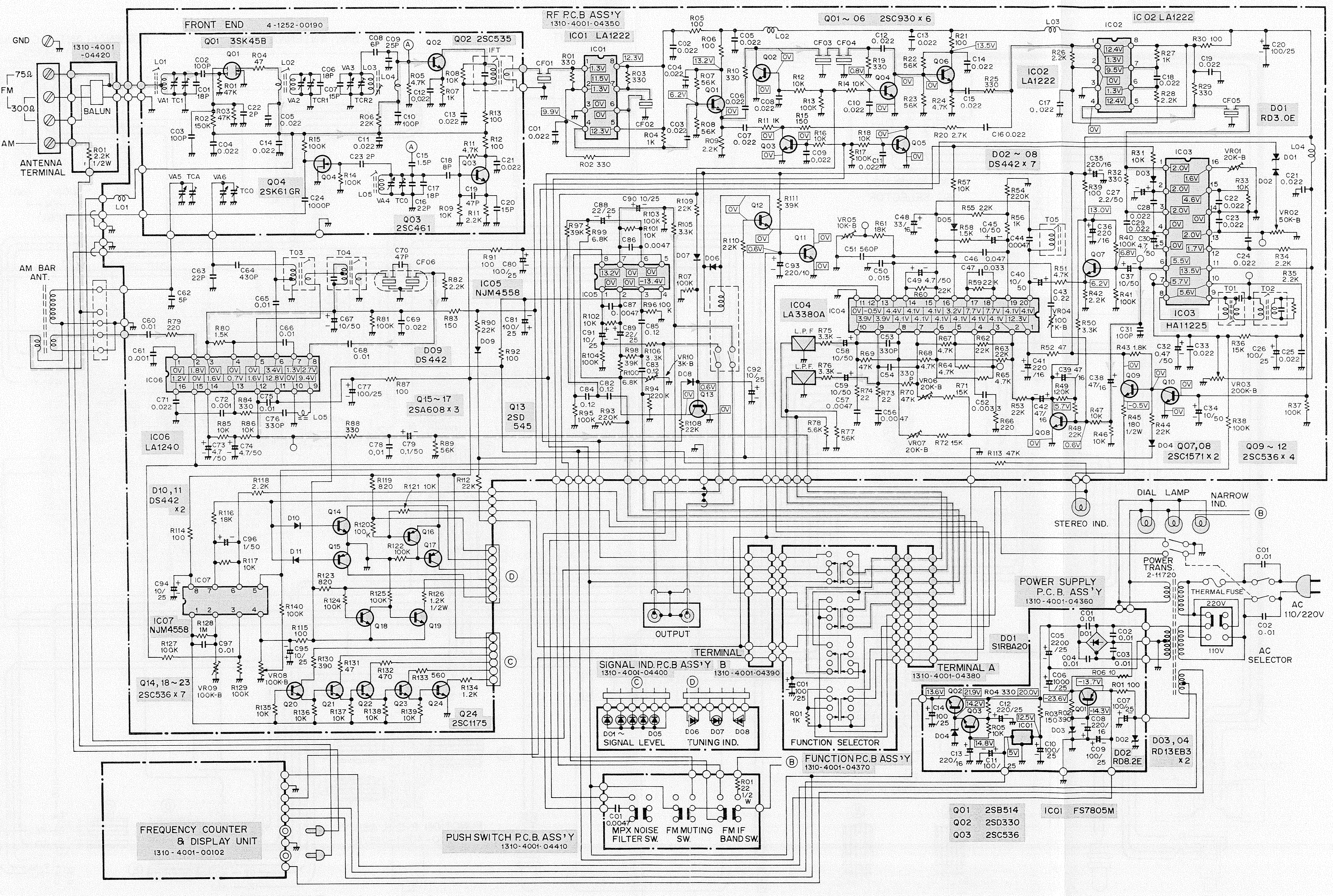
TERMINAL ANT P.C.B. Assy
131 0 4001 04420

Ref. No.	Parts Number	Description
	4 2372 00720	Antenna Terminal 4P

FREQUENCY COUNTER SCHEMATIC DIAGRAM


FLUORESCENT DISPLAY TUBE
HEATER
HEATER
GRID
AM
FM
102.5
kHz
MHz
AM/FM POINT
A1
G4
SEGMENT OUT (STATIC DRIVE)
IC02 MSM5525
COM 34
1(VDD)
2(S1)
3(S2)
4(S3)
5(S4)
6(FM/AM)
IC02
7
33
38(Fin)
37
36
35(Vss)
C15 33P
C16 33P
X'tal
C17 0.047
D01~04 DS442 x 4
D02
D03
D04
D01
L04 5μH
IC01 MSL2318
IC01
R19 2.2K
C14 0.047
C13 0.015
C07 0.022
C05 0.015
L03 5μH
R18 10K
C18 0.047
C12 0.01
R15 8.2K
Q05
R16 68
C10 0.047
R17 12K
Q04
R14 8.2K
R12 8.2K
R13 12K
C11 0.047
C08 0.01
L02 470μH
R11 82
C09 0.047
Q04,05 2SC930 x 2
Q01~03 2SC930 x 3
L01 18μH
R08 33K
Q03
R09 10K
R10 560
C04 0.01
Q02
R05 8.2K
R06 1.8K
C03 0.022
R07 1.8K
Q01
C06 0.022
R02 10K
R04 8.2K
R03 15K
C01 0.001
R01 82
C02 0.022
C01 1000PF
C02 1000
C03 1000
C04 1000
C05 1000
PF
C06 1000PF
C07 1000PF
HEATER
GRID
FM / AM
+BL (5V)
+BH (13V)
AM in Zin=75Ω
GND
FM in Zin=75Ω
HEATER

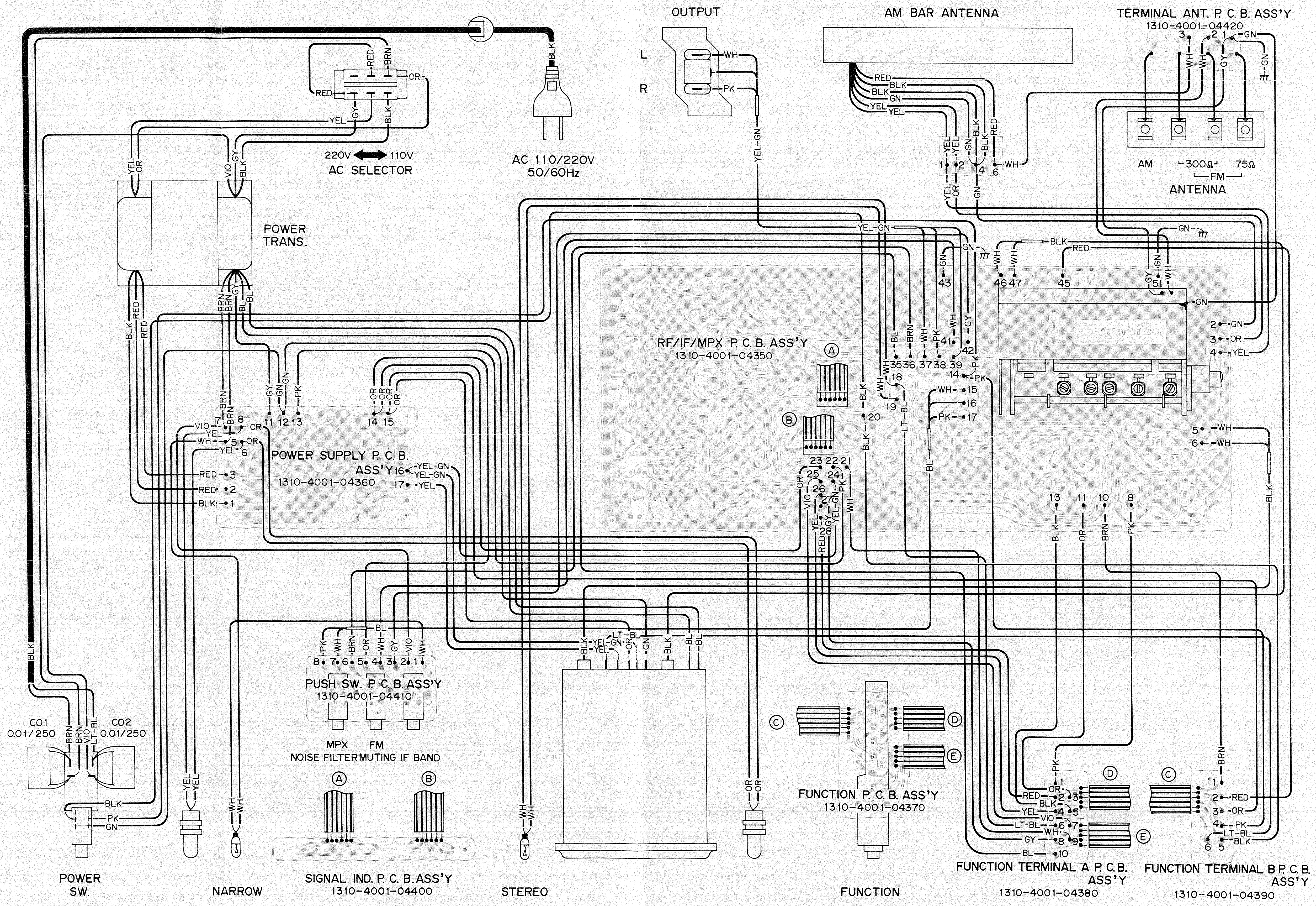
SCHEMATIC DIAGRAM


GND
FM
75Ω
300Ω
AM
ANTENNA TERMINAL
1310-4001-04420
BALUN
AM BAR ANT.
FRONT END 4-1252-00190
Q01 3SK45B
Q02 2SC535
Q04 2SK61GR
Q03 2SC461
RF P.C.B ASS'Y 1310-4001-04350
IC01 LA1222
Q01 ~ 06 2SC930 x 6
IC 02 LA1222
IC02 LA1222
D01 RD3.0E
D02 ~ 08 DS442 x 7
IC03 HA11225
IC04 LA3380A
IC05 NJM4558
IC06 LA1240
D09 DS442
Q15 ~ 17 2SA608 x 3
Q13 2SD 545
Q07,08 2SC1571 x 2
Q09 ~ 12 2SC536 x 4
D10,11 DS442 x2
IC07 NJM4558
Q14, 18 ~ 23 2SC536 x 7
Q24 2SC1175
STEREO IND.
DIAL LAMP
NARROW IND.
POWER TRANS. 2-11720
THERMAL FUSE
AC 110/220V
AC SELECTOR
POWER SUPPLY P.C.B. ASS'Y 1310-4001-04360
D01 S1RBA20
D03,04 RD13EB3 x 2
D02 RD8.2E
Q01 2SB514
Q02 2SD330
Q03 2SC536
IC01 FS7805M
OUTPUT
TERMINAL
TERMINAL A 1310-4001-04380
SIGNAL IND. P.C.B ASS'Y B 1310-4001-04390
1310-4001-04400
D01 ~ D05 SIGNAL LEVEL
D06 D07 D08 TUNING IND.
FUNCTION SELECTOR
FUNCTION P.C.B ASS'Y 1310-4001-04370
FREQUENCY COUNTER & DISPLAY UNIT 1310-4001-00102
PUSH SWITCH P.C.B. ASS'Y 1310-4001-04410
MPX NOISE FILTER SW.
FM MUTING SW.
FM IF BAND SW.

NOTES:

1. All resistors values are indicated in "ohm" (K=10³, M=10⁶).
2. All capacitors values are indicated in "μF" (P=10⁻¹²).
3. All volatages indicated on the schematics are measured under the following conditions.
   a. Use a V.T.V.M.
   b. All voltages ±10% with respect chassis ground
   c. No signals at input terminals
   d. AC input at 220 volts 50 Hz
4. This is a fundamental schematics diagram. Some products may be modified without notice.

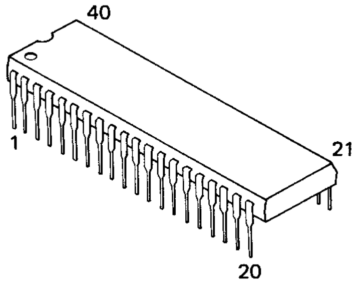
POINT TO POINT WIRING DIAGRAM



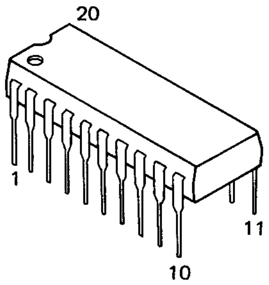
OUTPUT
L
R
AM BAR ANTENNA
TERMINAL ANT. P. C. B. ASS'Y
1310-4001-04420
AM
300Ω
75Ω
FM
ANTENNA
220V
110V
AC SELECTOR
AC 110/220V
50/60Hz
POWER TRANS.
RF/IF/MPX P. C. B. ASS'Y
1310-4001-04350
POWER SUPPLY P. C. B. ASS'Y
1310-4001-04360
PUSH SW. P. C. B. ASS'Y
1310-4001-04410
MPX NOISE FILTER
FM MUTING
IF BAND
SIGNAL IND. P. C. B. ASS'Y
1310-4001-04400
FUNCTION P. C. B. ASS'Y
1310-4001-04370
FUNCTION TERMINAL A P. C. B. ASS'Y
1310-4001-04380
FUNCTION TERMINAL B P. C. B. ASS'Y
1310-4001-04390
C01
0.01/250
C02
0.01/250
POWER SW.
NARROW
STEREO
FUNCTION
Ⓐ
Ⓑ
Ⓒ
Ⓓ
Ⓔ
BLK
RED
BRN
OR
YEL
GY
GN
VIO
WH
PK
BL
LT-BL
YEL-GN

SEMICONDUCTOR LEAD IDENTIFICATION

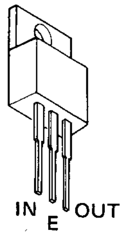
INTEGRATED CIRCUITS



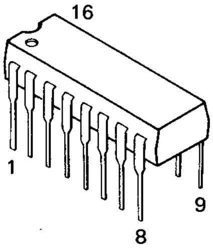
- MSM-5525



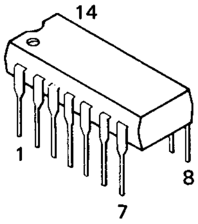
- LA3380A



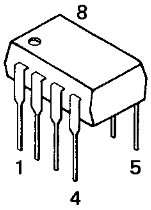
- FS-7805



- HA11225
- LA1240

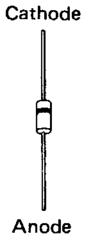


- MSL-2318

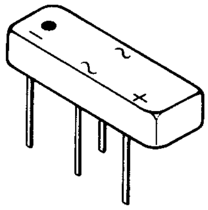


- LA1222
- NJM4558

DIODES

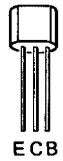

Cathode
Anode

- RD3.0E
- DS-442
- RD8.2E
- RD13E

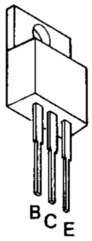


- S1RBA20

TRANSISTORS



- 2SC930
- 2SC1571
- 2SC536
- 2SD545
- 2SA608
- 2SC1175



- 2SB514
- 2SD330